

## **Municipal Facilities Committee**

Minutes of 07/24/2019 Meeting  
Submitted by Steve Hinton

Attendees: Kate Reid, John Lavery, Steve Hinton, Martha Feeney-Patten (Lib Dir)

Also present: Scott Simpson, Cynthia Sorn (Mosquito), Russel Feldman & Amy Jameson (TBA)

The meeting began at 8:00 AM.

Steve / John moved that the minutes for the meeting held on 7/16/19 and the public session of the meeting held on 7/19/19 were approved as amended. Cynthia Sorn questioned whether the 7/19 meeting was posted properly. Steve indicated that he believed it was, but agreed to confirm that with the Town Clerk.

Scott Simpson was introduced to the group.

TBA representatives provided an overview of their findings on the Library's infrastructure:

- A great building that is generally well cared for;
- Their recommendation of priorities were highly influenced by health and safety (H&E);
- Flat roof appears saturated in places and lacks adequate ventilation;
- Space ventilation is out-of-service and represents a H&E issue;
- General accessibility is adequate but doors need adjustment;
- A discontinuous hand-rail is also an H&E Issue; and
- The lack of handy-cap restroom is not a compliance issue given the public HC facilities.

TBA also noted the following possible improvements to program items: book drop should be relocated, sight lines from counter could be improved, reading room lacks sound isolation, and parking seemed inadequate (but a 15 expansion into the wetlands, if permitted, could improve the situation and add 10-15 spaces).

The pricing in the TBA report is presented in current year \$ (June 2019) and represents the `trades` cost marked up by 20 to 40 percent for general contractor mark-up, depending on difficulty and conditions. No construction management dollars are included in TBA's estimates. EMS \$ are not included; ETF funding might be a possibility. Roof repairs including ventilation are expected to cost \$100K. HVAC costs are expected to be \$175K. Carpet, already funded by town meeting, should run \$40K. The matrix in the report (**attached**) was reviewed in priority order.

Martha reported the current library annual budget averages \$21K per year plus 5K from LTCR.

Kate will ask BOS to present an annual town meeting warrantee article for funding an on-going maintenance program.

Next meeting will be 8 AM on 7/30; Jerry to post.



# GLEASON LIBRARY STUDY

## Existing Conditions & Treatment Recommendations

Prepared for the:  
**Town of Carlisle**

**August 1, 2019**

Prepared by:  
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## Town of Carlisle

### Existing Conditions Report, Treatment Recommendations and Maintenance Priorities for the Gleason Public Library

August 1, 2019

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#### Appendix 1 – Systems Assessment Checklist

## 1. Acknowledgments

**Project Name and Building Address:**

Town of Carlisle, Gleason Public Library Study  
22 Bedford St., Carlisle, MA 01741

**Project Team:**

**Town Hall**

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Carlisle, MA  
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**Gleason Public Library Stakeholders**

Martha Feeney-Patten – Library Director  
Steve Bastek – Carlisle Facilities Director  
Bill Risso – Carlisle Energy Task Force  
Jerry Lerman – Municipal Facilities Committee  
Priscilla Stevens – Gleason Library Committee

22 Bedford Street  
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**Architect – TBA Architects, Inc.**

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Amy Jamison, Architectural Designer

TBA Architects, Inc.  
43 Bradford St. Suite 300  
Concord, MA 01742

Report and construction cost estimates prepared by TBA Architects

Town of Carlisle  
Gleason Public Library  
August 1, 2019

Meetings and Site Visits:

4/5/19 – Russel Feldman and Amy Jamison of TBA met with representatives of the Gleason Library. Existing conditions discussions were had with representatives. The library was toured with notes and pictures taken to facilitate report preparation.

5/9/19 – Russel Feldman and Amy Jamison met with Martha Feeney-Patten, Steve Bastek, Jerry Lerman and Priscilla Stevens to take a second look at the building and review the Goals & Scopes Memorandum.

5/30/19 – Bob Jefferies and Amy Jamison met with Martha Feeney-Patten for preliminary review of draft study.

7/24/19 – Russel Feldman and Amy Jamison met with the Carlisle Building Committee to review the draft report.

Documents Consulted:

Information Sheet: Gleason Public Library Historic Building Envelope Restoration and Repair Project (May 22, 2010)

2016 Study and Report of HVAC Systems, BLW Engineers, Littleton, MA

Gleason Library Maintenance Log

Drawings from 1994-2000 Library Addition

Drawings from 2009-2010 Envelope Restoration

TBA would like to thank the staff and administration for their patience and assistance during our visits.

## 2. Executive Summary

TBA Architects was engaged by the Town of Carlisle to review the existing conditions, consider accessibility deficiencies and develop a life cycle plan for the various systems of the Gleason Library. In Report Section 3, we present a **Summary** of findings and our analysis of the **Existing Conditions** of building systems, organized along the ten section Uniformat system, accompanied by **Treatment Recommendations** to remedy observed deficiencies. We also evaluate the **Accessibility Conditions** and make brief statements regarding possible program related changes identified by staff and committee members. Recommendations to remedy building system deficiencies are illustrated in **Site and Building Plans** in Section 4. We present **Estimated Construction and Project Costs** in Section 5, with line items associated with each Treatment Recommendation. We also assign Project Priorities for each line item

## 3. Summary /Existing Conditions

### Summary of Findings

The original Gleason Library building was designed by George Gilman Adams in 1895, occupied in the Spring of 1896, and dedicated on May 13, 1896. Located in Carlisle Center, on one acre in the Historic District, and registered with the Massachusetts Historical Commission, this building is a well-preserved example of a small late Romanesque Revival library. The library has had two additions built behind it. The first, built in 1973 stood until it was demolished and replaced with the current addition, which was completed in 2000. The 2000 addition more than doubled the square footage of the original building. The entire library is Type III B Construction. The building does not have sprinklers for fire protection. With a floor area of approximately 11,500 square feet, this complied with building code requirements at the time of construction. As of this writing, the code requires buildings over 7,500 square feet to have sprinklers. A major renovation or any enlargement of the existing structure would trigger this requirement, so that the entire Gleason Public Library would need to have a complete sprinkler system.

Except for the chiller and the rooftop ventilation unit, all systems of the library have been updated within the last twenty years. A total envelope repair completed in 2009 repaired and sealed the exterior of the original building from the foundation to the roof. In 2014, a pipe failure led to the upgrading of the boiler and the fire safety system and prompted

replacing the finishes in the basement work area. While the building is in good condition overall, there are several areas of immediate concern: the flat roof and asphalt roof over the addition are allowing leaks and possible saturation of deck insulation; the downspouts have lost integrity; the chiller and ventilation system mounted on the flat roof has failed. In addition, certain elements on the interior and exterior require maintenance to preserve their integrity.

### Building Systems

Overall, the building is in good condition. We inspected the exterior walls, windows, doors, and roof visually from the ground level and flat roof level; the interior was inspected visually top to bottom. No destructive testing or observation was performed.

This description of existing conditions is based on the Uniformat Outline system for describing building assemblies. The following summary is based on that outline.

A. The substructure is not visible but is assumed sound as there are no signs of differential settlement.

B. Except for the asphalt shingled roof, the EPDM roof and most downspouts, the shell is in good condition. The masonry in the original building was repointed in 2009. The exterior doors are still sound, but the protective coating is peeling and needs to be refinished on the outside to preserve the wood. An emergency egress door and frame at the rear of the building has been damaged by water infiltration and needs replacement. In the original building, windows are single paned with new interior storm windows. In the 2000 addition, windows are double glazed aluminum clad and wooden framed. Paint is peeling on the wooden sills and frames in the original building. These areas need scraping and painting to maintain these wooden components. A few slate tiles on the roof have come down and should be replaced. The EPDM membrane on the flat roof is original to the 2000 addition and has failed in several locations as evidenced by signs of leaking throughout the ceiling on the second floor. The membrane needs to be replaced. Insulation under the membrane may be saturated and should be tested for water content. Redesign should be reconsidered as the snow accumulates on the flat roof in the winter above the levels currently flashed on walls and adjacent roofs. The asphalt shingles in the roof over the 2000 addition have begun to ripple in several places on the south side of the building due to improper venting and/or thermal expansion. It appears that original roof vents have been removed or were



not installed as originally designed. The same rippling is happening in the asphalt roof over the two east and west entrance gables. Further investigation is needed. However, the flat roof and the asphalt shingle roofs need to be redesigned to incorporate venting into the gabled areas and to better address snow drifts and possible water drainage.

C. The interior is in generally good condition except for the carpeting. The oldest interior renovations occurred in 2000 and other areas of the library have been attended to more recently. The carpeting throughout needs to be replaced as it is lifted and rippled in some places and in some locations represents a tripping hazard. Other areas of lesser concern are replacement of ceiling tiles, which are stained from the leaking roof; certain areas of the woodwork, especially on the horizontal surfaces, could be conditioned and surface rings could be removed.

D. Services

- Elevators: A hydraulic elevator that serves all floors is in good working order.
- HVAC systems: The boiler is operational. The chiller is 25 years old and needs to be replaced. Other areas of the HVAC system are not efficient and need to be replaced. The rooftop ventilation unit is not operational and should be replaced.
- Plumbing systems: All are operational.
- Electrical equipment: All are operational.
- Fire safety and alarm: All are operational.

E. Furnishings were not subject to review but appear contemporary and in good condition. It was observed that there are desktop computer stations in some areas of the library, which may be outdated at this time.

F. Special Construction: not employed.

G. Site Work was observed adjacent to the building. The pavement is in fair to poor condition. The sidewalks and granite blocks are in good condition. At different times of day, the parking lot can become overcrowded with cars. There is a desire to find more spaces in the existing parking lot and to consider expanding it, discussed below.

Accessibility

Gleason Library is currently accessible per the provisions of CMR 521. It is required to have an accessible entrance, restrooms, and administrative offices. We observed no deficiencies that require correction although modification of the staff restroom would make it compliant with Massachusetts Architectural Access Board requirements.

### Program

We were not tasked with reviewing the program in this study. However, we report four program-related matters that came up in our discussions with the staff and committee. The costs for the additional programming are included in the body of the report for informational purposes. These costs are not included in the cost estimate.

1. There was an interest expressed in increasing the number of parking spaces on site. We observe that such an increase may be possible by developing angled or perpendicular parking along the back of the paved area.
2. Sound transmission between the entrance area and the reading room upstairs was a concern. We observe that a properly designed glazed partition and door enclosure at the base of the reading room stair could isolate sound between the spaces.
3. A need for improved visual control at the entry. We believe the circulation counters can be reconfigured to provide improved sight lines to control both entrances from a single location. Alternatively, camera monitoring equipment would also provide visual control.
4. An interior book depository would protect the collection. We have identified a location that would allow after-hours deposit of books directly into the building.

### Cost Estimates

Costs assume general construction contracts publicly procured under the provisions of MGL chapter 149, in 2019 dollars, unadjusted for inflation. The Subtotal, Construction Costs represents the cost of the work by each trade as received by a general contractor. The Total, Construction Costs includes the general contractor's costs of mobilization, general conditions, profit and overhead, and a recommended contingency for design changes and unexpected conditions encountered during construction. The Total Project Cost design and engineering fees, and soils and hazardous materials testing. This estimate does not include the costs of project management, furniture, fixtures and equipment (FF&E) (other than as identified in the estimate), temporary facilities or moving expenses if required to maintain operations during renovation.

Priorities are established based on considerations of life safety, building stabilization, and regulatory requirements and standards.

Priority 1: Work that should be performed immediately to protect health and safety.

Priority 2: Highly recommended due to deferred maintenance but not required to address life or environmental safety or building stabilization; work that addresses serious operating

deficiencies or which is required to maintain approvals by regulators overseeing departmental operations.

Priority 3: Recommended to improve operations and/or site design.

Priority 4: Work that would improve operations and facility longevity or which addresses the impending end of product or equipment life cycles.

Priority 5: Work that may be required in the medium-term, but which does not affect operations at this time.

Costs (in 2019 dollars) are rounded and this table may not sum precisely due to rounding errors. Also, design fees may vary depending on the size and complexity of the projects.

	Priority					
	All Items	1	2	3	4	5
Estimated Construction Cost	\$630,000	\$25,000	\$445,000	\$77,000	\$82,000	\$2,000
Total Project Cost	\$708,000	\$28,000	\$500,000	\$86,000	\$92,000	\$2,400

### Contracting Strategy

Priorities listed above reflect each line item taken separately. However, certain work items affect others, and these tasks may appropriately be considered in terms of grouping to complete the work efficiently, avoid duplication and lessen the construction costs. For example, the absence of fresh air is a priority 1 project and replacing the flat roof is a priority 2 with related components of roofing are a priority 3. However, replacing the roof and curbing should be performed at the same time as replacing the ventilation equipment. This would avoid possible damage to the new equipment if it must be disconnected and relocated to accommodate the roofing work. We therefore recommend a single construction contract to include roofing, curbing, flashing with new ventilation equipment. We estimate that the construction cost for this contract is approximately \$99,000 and the total project cost is \$112,500. (Estimates are in 2019 dollars.)

### Annual Replacement Reserve

We have also included a recommended budget to create a replacement reserve fund as part of the library's annual budget. This is a projection of the money needed by the library to provide adequate reserves for repair and replacement of the library's building systems going forward. Ideally, providing this reserve will avoid the need to make emergency repairs or require a large capital project.

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We have determined a recommended annual reserve based on the value of the existing structure, the life cycle of its various components as presented in the Unifomat spreadsheet attached to this report, and the components current condition. This annual amount is \$131,650.

Please note that this does not include either the prioritized deferred maintenance items we identified above, or any site-related spending as this was outside the scope of our study.

## **Existing Conditions and Treatment Recommendations**

What follows reflects our observations of the condition of the structure and recommended treatments for the original building (1895) and the addition (2000). Our observations are organized in the ten section Unifomat system, per Commonwealth of Massachusetts standards.

### **A. SUBSTRUCTURE**

#### **A10 Foundations**

**Original Building (1895)** - The original building is founded on brick and field stone which, according to plans for envelope work on the building, was repointed with mortar and received waterproofing in 2009. The grade around the original structure is almost level with the top of the foundation wall around the original building, creating a basement under it. Staff reported that the basement work area continues to be dry since 2010. Behind a retaining wall on the East and West sides of the original building, the grade drops down an entire story, where the 2000 Addition connects to the original building and the new main entrances to the library are found. The first floor of the 2000 building addition is at the basement level of the original building.

**Addition (2000)** - Behind a retaining wall mentioned above, the 2000 Addition connects to the original building and the new main entrances to the library are found. The first floor of the 2000 building addition is at the basement level of the original building. The addition sits on a slab on grade which is supported by a foundation wall which is not observable. The plans indicate that the foundation wall is four feet deep and 8 inches thick. The foundation walls sit on footings that are one foot deep and three feet wide. No signs of abnormal settling were seen that would indicate that the foundations are not stable. It is assumed they are in good condition and functioning as designed.

**A20 Substructure – Not Observed**

### **B. SHELL**

#### **B10 Superstructure**

**Original Building (1895)** - The building is classified as Type III-B.

Addition (2000) – The addition is classified as Type III-B.

B1010 Floor Construction:

Original Building (1895) - The building has three stories with a fully occupied basement level, which provides four habitable levels. The basement floor consists of a concrete slab throughout. The concrete slab in the office area is under vinyl tile floor finish and is not observable. In the mechanical rooms, the slab is covered in an old vinyl tile floor. There are no signs of unexpected deterioration of the finished floors, so the slab is assumed to be in very good condition as well. The flooring is discussed below. The first floor structure is concealed from below by a drop ceiling, the second floor structure is concealed by a plaster ceiling. Currently the floors on the first and second floors are carpeted, which is discussed further in flooring. Although we cannot see the structure of the floors, we observe that the floors are in good condition with no signs of settling or deterioration. On the third floor, the floor appears in very good condition; the wood finish that covers the structure is polished and in good condition with an area rug in the center.

Addition (2000) – According to the drawing, the ground floor of the addition consists of a



*Threshold at rear egress door with damaged concrete slab.*



*View of Beams and Decking in Addition*

five inch floor slab, which sits on six inches of compacted gravel. The slab is covered in carpeting and cannot be seen. From what we could observe, the floor slab does not show any signs of settling or cracking. The only place where we observed damage to the slab is inside the egress area of the stairwell in the rear of the building. The upper floor of the addition (at the level of the first floor of the original building) is framed with steel beam with steel decking and a poured concrete floor. We were able to see a glimpse of it when one of the ceiling tiles was removed. It appears to be in good condition.

**Treatment Recommendation:** We recommend cleaning the damaged area of the slab, repairing the cracks and other disintegration and resealing it.

**B1020 Roof Construction:**

Original Building (1895) –The slate roof is steeply pitched, supported by 2" x 10" wooden rafters 24" on center. 8" boards span the rafters.



*Rafter and boards of original roof seen from attic in original building.*

The slate roof was significantly restored and repaired in 2010, during the Envelope Restoration and Repair Project. At that time, the slate shingles were removed, the disintegrated weather barrier was removed (felt), and damaged roof decking was replaced.

A new weather barrier was installed and original shingles in good condition were reused, others were replaced. Although staining can still be seen from the interior (not shown here), this is likely from water infiltration from over ten years ago, before the entire envelope was repaired. No dampness was observed now.



*Gabled areas over main entrances in addition.*

Addition (2000) – We cannot observe the steel structure and deck of the flat roof that connects the original building to the addition. We have reason to believe it is in good condition as no settling or movement is apparent. We observed a sample of it where a ceiling tile was removed and, in this area, it appeared to be in good condition.



*Mildew growing on plywood of roof deck over gabled entrance.*

There are two small gabled areas over the east and west entrances of the addition. We were able to observe the wooden rafters and decking from the interior of gabled area. We noted that these areas are not vented properly, and that mildew is present on the plywood decking.

We could not observe the structure of the gabled roof over the addition.



**Treatment Recommendation:**

The structure under the slate roof is in good condition. No action is needed.

The structure under the flat roof is not observable but is presumed to be in still good condition as there is no settling or movement, despite the numerous leaks through the covering. Insulation should be tested for moisture content and inspection of the roof deck should be performed as part of project planning of replacement of roof and HVAC systems. The structure should be inspected but we do not anticipate that action will be needed.

The condition of the structure under the asphalt roof at the gabled entrances is in fair condition. The rafters are good, but the plywood decking has mildew growing on it and some warping is observed. If the plywood decking is damaged it should be replaced; otherwise it should be treated for mildew.

The structure of the asphalt roof over the addition is not observable. We have noted that the roof is not vented correctly and that the asphalt shingles have warped either due to improper venting or thermal expansion. We do not know if there is any damage to the plywood sheathing and the structure beneath. This should be closely inspected as part of the reroofing and modification to roof ventilation.

In summary, we recommend further study of the roof system (the flat and gabled roofs), which are over the addition. We know that the asphalt shingles and EPDM roof coverings are at the end of their life cycles and should be replaced immediately as the flat roof is leaking. We recommend not only replacing the coverings, but also extending the flashing up two feet on each of the gabled roofs and the slate roof over the original building to prevent continuing damage due to snow drifting. To maintain this two foot containment, the sill of the access door might be raised, or the door seal modified. Additionally, venting needs to be added to the small gabled roofs and the main roof over the addition. The venting must be placed in such a way that it is not blocked by the snow that builds up in the winter. Redesign of these aspects of the roof system is needed. Last, when the roof coverings are removed, inspection of the structure will be possible to determine as to what if any parts of the structure need to be replaced.





*Figure 14 - Spalling bricks SW corner of original building.*

#### B20 Exterior Closure

B2010 Exterior Walls: Original Building: The structure of the walls is not observable, but it is presumed to be constructed of timber as we can observe in the attic. We cannot observe how the structure is sheathed. The original building is clad in brick with granite sills, headers, and blocks; and granite and terra cotta ornamentation. The brick is in excellent condition overall however we observed

spalling in the bricks on the SW corner. The granite sills on the north side are beginning to host mildew in various places. We did not observe the interior conditions anywhere within the walls. Cold spots are reported within the interior spaces, especially on the second floor, which may be due to poor air distribution or thermal losses through the walls. However, without destructive investigation we could not verify insulation within the walls. The interior walls are finished in either a wooden lath covered in plaster or in gypsum board. Overall the condition of the walls is good. Walls are finished in paint, wood trim, or tile. We noted paint peeling in the north egress stairwell, and the stairwell between the second and third floors, and the west wall of the third floor.

2000 Addition: The addition is clad in brick and granite weep holes in the mortar are clear. There is no apparent movement or settling of the wall, though we observed that the brick walls are not completely flat. We cannot observe the inside of the walls, but we note that batt insulation is indicated on the drawings.

#### Treatment Recommendation:

B2010 Exterior Walls: The granite areas of the north side of the building should be cleaned to discourage mildew from growing and prevent associated problems from developing. The spalling brick on the SW corner should be replaced with intact brick and the cause of the spalling should be further investigated. If the condition is not determined to be due to moisture migration from the interior, the existing bricks may be protected with an application of an appropriate protective coating. The caulking at the expansion joint

between the original building and the addition has failed. We recommend testing for insulation and if it is not present, adding loose fill insulation to the walls and batt insulation to the attic. The exterior walls in the addition are in good condition and do not require any action at this time.

#### B2020 Exterior Windows:

**Original Building:** In the original building the window and door heads and jambs are trimmed in wood, which are in fair condition overall. The window sashes are wooden and have interior storm windows attached. On some exterior window sashes the glazing has separated from the sashes, and the paint is peeling. On one front window one of the muntins has fallen off.

**2000 Addition:** All window frames, which are all metal, appear to be in good condition and housing operable windows. We note that there are openings in the corner miter joints. We note that there are no weep holes between the bottom of the window frame and the sill is sealed with caulk. The sashes appear to be in good condition and operating.



#### Treatment Recommendation:

**Original Building:** The windows in the original building need to be restored. The glazing putty has dried out and should be tested for asbestos and abated if necessary, before any work begins. The window sashes and frames should be reglazed, scraped, primed and repainted. The interior storm windows that do not open but which are made to be operable should be fixed. The original building lacks access to fresh air, affecting indoor air quality.

**2000 Addition:** Caulk where the window frames have separated at the corner joints. Remove caulk at the sill.

#### B2030 Exterior Doors:

The East and West main entry exterior doors are two paneled, wood and glass doors, set in wood frames. There is a glass vision panel on the top of each door. The protective finish on the main doors is peeling. We note some cracking and graying of the wood. All four doors are motorized with ceiling mounted operators and push button operators adjacent to the doors. The staff reported to us that the door opening mechanism is of concern. Due to the sticking the motor works harder than it might have to, and the doors remain open too long. Doors, seals and stops are in fair condition.

The North egress doors (the original main entrance) are wood and glass and the South egress door is metal. The North egress door (formerly the main door) is dirty. The South egress door is rusting and sticking and is not completely sealed at the bottom. This has led to water infiltration which has damaged the concrete slab in the Southeast corner as noted in the previous section.



*East Main Entry Door*

**Treatment Recommendation:**

East and West Main Entrance Doors: The doors should be scraped, sanded and re-sealed. The opening and closing mechanism should be adjusted for proper operation and to contain conditioned air inside the building.



*North Egress Doors*



*South Egress Door*

Egress Doors: The south egress steel door and frame should be scraped free of rust, primed and painted. Alternatively, due to the damage already suffered, consider replacement of the door and the frame. Add an exterior surface mounted sweep to prevent water from entering. The north egress door and alcove area should also be cleaned.





*Lichen growing on north side of slate roof.*

### B3010 Roof Coverings

Original Building: The slate roof on the original building is in generally good condition after the envelope restoration project in 2010. The slates are in good condition on three sides. On the north side (front), the slates are becoming a home to lichen. Some shingles have become loose and have fallen. We observe that the flashing around the plumbing vent is displaced. The step flashing on the chimney appears to be in good condition however our observation is limited to what can be seen from the flat roof. With the same caveat about our access, the flashing in the hips, ridges, and valleys appears to be in good condition. The gutters appear to be in good condition. Many of the copper downspouts have failed, with the vertical seams (facing the building) on the back side have opened. This may be due to ice buildup starting at the base and expansion up the downspout.

### 2000 Addition:

Flat EPDM Roof: The EPDM covering is at the end of its life cycle and is in poor condition.

The library stakeholders reported that the roof leaks in numerous places in the wintertime,



*Flat roof at new addition.*

and drips into the habitable areas of the upper level of the addition. The rigid insulation under the EPDM appears to have been saturated due to the roof leaks



*Damaged gutter and flashing on west elevation of flat roof.*

although we could not observe this directly. There is damage to the gutter and the flashing on the west side of the building. The

gutter and flashing are bent. The copper downspouts have failed as noted above, with the vertical downspout seams in the back expanded and opened.



*Asphalt shingles rippling and falling in roof addition.*

**Asphalt Roof:** The asphalt shingles are twenty years old and are nearing the end of their useful life. Many shingles are rippling, particularly along the top courses on the south (rearmost) face of the building. A few have slipped off. Roof ventilators along the lower roof courses on the North face of the addition (abutting the flat roof) which were original to the design have been covered with asphalt shingles.



*Four courses of shingles which replaced venting on roof of addition.*

#### **Treatment Recommendation:**

**Original Building:** We recommend yearly inspection and maintenance of this roof. Presently, replace the slate shingles that have fallen, check the flashing around the plumbing vent and other areas. When the roofing is replaced on the addition, we recommend removing the slate and asphalt shingles for about two feet and carrying membrane up where the shingles meet the flat roof to accommodate snow drifts and/or buildup during the winter.



*Rippled asphalt shingles on entrance gables.*

**2000 Addition–Flat EPDM Roof:** This roof is leaking and should be replaced. There are testing methods which can establish whether the rigid insulation under the roof deck is waterlogged. These tests should be performed immediately to determine the condition. If the insulation is wet, it should be replaced and the roof deck underneath should be examined to determine whether it is damaged and in need of repair. The flashing details should be modified to provide a deeper basin and to prevent leakage as indicated above.



*Open seam at back of downspout.*

**Asphalt Shingle Roof:** This roof covering is near the end of its life. The shingles are warped on the southern exposures, which may be due to the lack of ventilation. While the flat roof is replaced, this roof should be investigated further to determine whether it should also be replaced. As discussed, the flashing for the flat roof should extend two feet up from the flat roof. This roof also needs to be better ventilated. The ventilation system that was taken out needs to be restored. Methods of ventilation should be explored in detail when the roof work is commissioned. Any ventilation should be raised up from the flat roof, so it does not become blocked with the snow in winter.

**B3020 Roof Openings:** Roof access is via the door in the third floor. There is a plumbing vent, a roof top ventilation unit and two skylights. All the flashing, curbs and boots in the flat roof and the asphalt roof are assumed at the end of their life with the rest of the roof covering. New curbs may be required for new HVAC equipment. As indicated below, we recommend that new equipment be installed as part of the reroofing project.

**Treatment Recommendation:**

As stated, given the numerous leaks in the flat roof, it should be replaced. At this time, all roof penetrations and openings should be repaired or resized if needed and reflash.

**Caulk:** Some caulking is drying, cracking and separating at locations around doors and windows and at the expansion joint between the original building and the addition.

**Treatment Recommendation:**

The caulking should be removed and replaced with a single component silicone suitable for metal to metal joints and an acrylic at any wood joints. Backer rod should be used behind sealant joints.

Paint: The paint system is in generally good condition with the exception of the bottom of the South egress stair, the stairwell to the third floor and the third floor meeting room where some bubbling has occurred.

**Treatment Recommendation:**

Scrape and remove all loose and flaking paint at the interior walls and trim. Reprime and paint with interior paint to match existing paint on walls and trim.

**C. INTERIORS**

**C 10 Interior Construction**

Drywall and wood stud framed partitions make up most of the interior of this building with some areas of original plaster. The office areas are of painted drywall, the public areas consist of painted plaster, painted drywall and wood paneling.

**Treatment Recommendation:**

All partitions appear to be sound in construction and the finishes are in good condition. The wooden paneling could be conditioned to prevent future cracking.

**C20 Stairs**

C2010 Stair Construction: A grand staircase provides connection from the ground floor to the second floor/main floor of original building. The risers and treads are finished in terrazzo. The staff has reported that sound carries from the reading room above to the circulation desk below.

**Treatment Recommendation:**

Sound attenuation in the stairwell could be accomplished with glass partitions and a glass door, configured to comply with accessibility regulations. This should be studied further. We have roughly estimated a glass partition to cost \$20,400 (2019 dollars).





*Discontinuous Handrail*

C2014 Stair Handrails and Balustrades: Handrails are wooden and the railing is metal. The handrail is not continuous.

**Treatment Recommendation:**

The discontinuous handrail must be modified to be a continuous handrail as required by MAAB regulations. As it exists, it is a code violation.

**C 30 Interior Finishes**

C3010 Wall Finishes: Interior walls are drywall with some wooden paneling in the public areas. Most paint is intact. The paneling is in good condition with some areas a little bit dried out. The restrooms are a combination of drywall and tile. Hazardous materials testing has not been performed and no destructive investigation was conducted.

**Treatment Recommendation:**

No action is required now.

C3020 Floor Finishes: Hazardous materials testing has not been performed and no destructive investigation was conducted.

Vinyl: The basement work area has 12x12 vinyl tiles directly applied to the concrete slab. The floor in the public spaces is in good condition. Mechanical spaces have vinyl tile that is damaged and missing in certain areas. As utility spaces, the public does not see these areas.



*Raised Carpet*

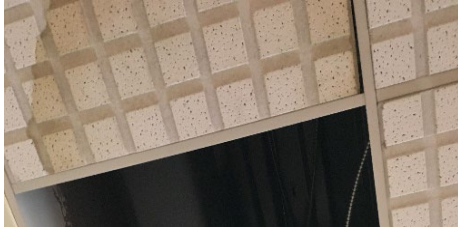
Carpet: Carpeting is present in the public areas of the library on the ground floor and upper floor. The carpet is in poor condition and is raised in some areas and is a tripping hazard.

Terrazzo: A terrazzo floor is found in the entrance area and main stairs. It is still in very good condition.

Hardwood Floor: The third floor meeting room has the original hardwood floor. It has been maintained and is in good condition

Area Rug: The hardwood floor on the third floor is covered with an area rug, which is in good condition.





*Stained ceiling tiles.*

**Treatment Recommendation:**

Vinyl: No action is required at this time, except in the service areas. Damaged tiles should be removed and replaced, and all missing tiles should be replaced.

Carpet: Carpet is in poor condition and should be replaced.

Terrazzo: No action is required at this time.

Hardwood Floor: No action is required at this time.

Area Rug: No action is required at this time.

C3030 Ceiling Finishes: The ceiling on the ground floor area and on the upper floor between the original building and the addition are 2x2 lay-in tile in an exposed T-grid. They were installed in 2000. Numerous watermarks show what may be active leaks in the flat roof above the connecting area between the original building and the main area of the addition. The ceiling is hung horizontally with lights surface-mounted on the grid. In the original building and on the upper floor of the addition, the ceiling is plaster and drywall. Lighting is surface mounted and consists of recessed lights and pendants.

**Treatment Recommendation:**

After work on the roof is completed, the damaged ceiling tiles should be removed and replaced.

**D. SERVICES**

**D10 Conveying**

D1010 Elevators and Lifts: There is one 2500 lb. capacity elevator in the building. It was added in 2000 when the addition was built. It meets the current code for accessibility. It is operational and in good condition.

**Treatment Recommendation:**

The elevator is approaching 20 years old, which means different parts of it will soon need to be replaced and annual maintenance will increase in cost.

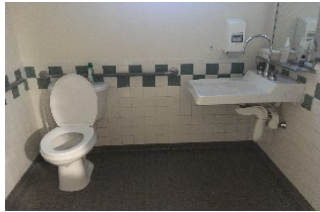
## D20 Existing Plumbing Systems

Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, and wastewater systems, and natural gas. The building is serviced by private on-site well water and on-site septic sewer systems.



*One of the public toilet rooms.*

D2010 Plumbing Fixtures: There are four toilet rooms in the building: one restroom for staff in the basement of the original building; two public restrooms in the first floor of the 2000 addition, and one public restroom on the second floor of the original building. There is one maintenance closet.



*Inaccessible Staff Toilet Room*

Plumbing fixtures of vitreous china generally are in good condition. The water closets are floor mounted, two piece tank types and standard 1.6 gallon flush. There is also a wall-mounted urinal with flush valve and wall-mounted lavatory with a manual knob faucet. Faucets are chrome hot and cold knob type and single spigot. All are in working order with no complaints from staff. The staff restroom is not fully accessible; the public restrooms are accessible. There is a single deep basin service or slop sink in the maintenance closet.


D2020 Domestic Water Distribution: The water supply service, distribution and waste piping were not observed in detail on our visit. The wellhead is in the front of the library. The septic system is located under the parking lot to the rear of the building and in the wetlands.

Domestic hot water is generated through a Bradford White 36 Gallon 240 volt Electric Water Heater. The unit is a replacement unit installed in September 2018 when the previous unit failed. It is in very good condition.

D2030 Domestic Wastewater System: Building water waste is via an on-site septic tank. Inspections were not made, but the tank is located under the driveway at the south side of the building. We were not able to observe any of the wastewater system, as it is all underground. The director reported that the tank is emptied regularly, and that the system

is functioning and is well maintained. Evaluation would be required if the facility is expanded or renovated.

D2040 Rainwater Drainage:

Roof drains and foundation drains collect rainwater and direct it away from the building. Downspouts, many of which have failed, lead water to a  roof drain system underground. The water from both the roof drains and the foundation drains collect in two drywells on the east and west side of the property and then slowly drains into the ground. One trench drain at the west entrance collects storm water and runoff from vehicles in the parking lot. It appears that the drainage system is working. It has been noted in another section that many downspouts and boots have failed. It appears that the trench is functioning but should be cleaned. Staff reported that the drain has become clogged and the entrance to the library has flooded.

D2090 Other Plumbing Systems (Natural Gas): The building is serviced by natural gas. The gas meter is located at the north elevation. Gas is supplied to the boiler.

Treatment Recommendation:

Renovate existing the Staff Toilet Room to meet ADA/MAAB requirements and water conservation mandates. Install thermostatic mixing valve at domestic water heater to prevent scalding if not already present. The wastewater system appears adequate for the current use. The gas service would need to be reviewed further in the event of an expansion.



*Boiler Screen*

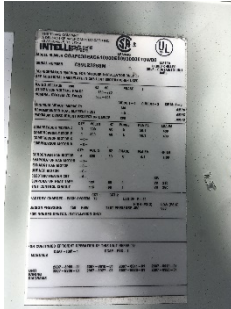


*Part of HVAC system  
that is corroded.*

D30 Heating Ventilating and Air Conditioning (HVAC)

D3020 Heat Generating System: The existing heating system consists of a gas fired, Lochinvar condensing boiler rated for 600 MBH gas input. The heated water is pumped through the building by a base mounted circulating pump, Nepco

model RB09-25-050-17-3 to forty fan coil units to heat the building. The building loop is a two pipe manual changeover system which provides heating hot water in the winter and chilled water in the summertime. There are also two electric fan coil units in the entrances. We observed deterioration of the pipes in the mechanical room. The director reported uneven heating and cooling in the building, especially on the upper floor.



*Outdoor Chiller Facts*

**Air Conditioning:** Cooling is provided by an outdoor 30 ton Trane air cooled chiller, model CGA 030. It is connected to the building loop through summer/winter changeover valves. The chiller is over 25 years old. The director has gotten a quote for a similar replacement unit.

**Automatic Temperature Control:** There is a Trane automatic temperature control system.



*Rooftop Ventilation Unit*

**Ventilation:** Currently the library is not being ventilated. A rooftop ventilation unit exists; however, it has not been in operation since 2016. The library director has gotten a quote to replace the unit. The windows in the original building do not open easily with the interior storm windows in place and are not used for ventilation. The operable windows in the addition provide the only means of providing fresh air ventilation. The restrooms have exhaust air fans that are activated by the light switches.



*Rooftop Fan*

### **HVAC Treatment Recommendation:**

1. In the summer of 2016, BLW Engineers were called to study the HVAC system extensively due to observed corrosion of the pipes in the mechanical system and uneven heat throughout the building. We have reviewed the report and find it thorough and consistent with our observations. BLW provided recommendations for upgrades. To date, the Library has implemented strainer cleaning for the fan coil units; the system has been flushed; glycol was added to the water; and a bag filter was added. We recommend implementing the major work proposed. The system is not operating effectively or

efficiently. Despite being oversized it does not adequately heat or cool the building. Different components of the system need replacement. The BLW summary provides an itemized list of the repairs and replacements that need to be done to make the HVAC system efficient and effective and provides two options for achieving this. In addition to the repairs and replacements to the system listed in the report, the chiller and the rooftop ventilation system need to be replaced as the chiller is over 25 years old and the rooftop ventilation unit does not work. We understand to replace with the same unit. We recommend further study to verify that replacing the chiller with the same unit is the best choice when a major overhaul of the entire HVAC system is done. We suggest that this work coincide with the new membrane roof and associated modifications as recommended above.

#### D40 Existing Fire Protection Systems

D4020 Standpipes: There is no fire sprinkler system. This was code compliant at the time of the addition however at 11,300 square feet, the building's current size is above the current MA law threshold of 7,500 square feet requiring a sprinkler system. Any expansion to the building area (inside or outside the footprint) would require the addition of a fire sprinkler system throughout the Library.



#### Treatment Recommendation:

Installation of a new sprinkler system is not required unless changes are made to the existing building triggering such system. A system would require a cistern, fire pump, backflow preventer, standpipe, and all new piping and heads.

#### D50 Electrical

The existing electrical underground service to the building feeds an existing 600 Amp main breaker panel board located in the basement electrical room of the original building. The existing electrical equipment is in good condition. The fire alarm system was replaced in 2014 is operable and in good condition. Emergency lights and exit signs are battery powered.



The lighting throughout the original building and the addition consists of LED fixtures. Most of the lighting in the original building was updated when the 2000 addition was built. The building fixtures are recessed lights, pendants, chandeliers, and are surface mounted. The lighting in the bathrooms is on occupancy sensors. Site lighting is achieved with lamp posts around the parking lot. Lanterns mounted to the building furnished with CFLs light the entrances.

D5010 Electrical Distribution System: Existing service consists of an underground service rated at 600A. The meter is located inside the building in the electrical room in the basement work area of the original building. The main service consists of a 600A main circuit breaker panel located in the same electrical room in the basement of the original building. There is no emergency power panel.

#### D5020 LIGHTING AND BRANCH WIRING

D5021 Branch Wiring: The staff reported that they do not observe any inadequacies or problems with the current wiring. The wiring in the addition was installed at the time of original construction in 2000, is concealed and was not observed. The wiring in the original building is was also concealed and unobservable. The wiring in the original building is unknown.

D5022 Lighting: Interior lighting consists of recessed, surface and pendant mounted retrofitted LED fixtures in the reading rooms, offices, break room and bathrooms. All are on standard switches. The bathrooms have occupancy sensors. Exterior lighting consists mainly

of surface CFL fixtures mounted at all exterior walls. There are six pole lights on the site located on the east and south sides of the building. There are three lights located on the north side (front) of the building.



#### D5030 COMMUNICATIONS AND SECURITY

D5032 Security System: A DSC security panel is located outside the Director's office. It is operational and is monitored by Lexington Alarm, who has a six month contract with the library.



D5033 Telephone System: The building is served by a Lucent Partner System from 2000. The library has already replaced several handsets. There is no building PA system.

D5037 Fire Alarm: The fire alarm system is a Simplex 4100 ES control panel in the work area in the basement of the original building. This panel was installed in 2014. The alarm connects to the emergency dispatcher in town but does not provide any details. The system was not reviewed in detail, but we note that it is up to the most current code.

#### D5090 OTHER ELECTRICAL SYSTEMS

D5091 Generators: There is no generator in this building.



D5092 Emergency Lighting: Emergency lighting was noted but not reviewed. It is battery powered. Exit signs are present and lighted.

Timeclock System: Time clock systems are used for the chiller (Tork); the outside lights (Grasslin); outside power outlet; and the bathroom exhaust fans. All timers date from 2000 except the Tork timer for the chiller, it is from 2017.

#### Treatment Recommendation:

No action is needed. All electrical, data and communication systems are working and appear to be up-to-date. The staff reported that the original building does not have one gang box where the entire building's lights can be turned off and on. They reported that the 2000 addition has one gang box where lighting for the entire addition is controlled, which is preferable to walking all over the original building to turn off the lights. Rewiring to remedy this operational inconvenience would be prohibitively expensive however. The Square-D emergency electrical switch is in good condition. Lighting has been upgraded to LED throughout. Convenience and data outlets are adequate.



Emergency lighting and exit signs are battery powered and meet current code. Fire alarms are checked regularly and meet current

code; there is no sprinkler system. There is no backup generator at the library.

## **E. Equipment and Furnishings**

### **E10 Equipment**

E1020 Institutional Equipment: The circulation desks are in good condition overall. However it was observed by staff that monitoring both the east and west entrances is awkward from a single station, requiring two staff members to monitor the entrances, or having a single staff member stretch over the circulation counter or move out from behind the counter to monitor both entrances.

#### Treatment Recommendation:

Redesign of the counter to position a single staff member in the lobby would allow continuous direct view of both entrances. Such a reconfiguration might create an opportunity to reconfigure and possibly increase storage and positioning of equipment. Alternatively, installation of camera monitors at each entrance would provide monitoring capability. Additional study of counter redesign and/or security equipment would determine possible options and costs to resolve this issue. We estimate that rebuilding the reception desk would cost \$29,000 (2019 dollars).

E1090 Other Equipment: The after-hours book drop off is located on the east side of the building. It appears to be in good condition except for the locks. The original lock has failed and now padlocks are used. In the winter, the padlocks freeze, and it is difficult to pick up the returned materials. Staff have requested a study to create an interior book drop. We estimate an interior book drop would cost \$6300 (2019 dollars).

Other pieces equipment reported are:

Ricoh MP2555 Copy Machine (2017);

VenMill 3500 CD Buffer (2007);

EQ1 Seismometer and attached Dell Optiplex 790 (2012).

#### Treatment Recommendation:

Should it be desired, an interior book drop could be installed in one of two locations alongside the east entrance doors so that books dropped through a slot in the exterior wall



could land in a depository on the building interior. Detailed designs should be explored further to determine the best and most cost-effective option.

## **F. Special Construction and Demolition**

### **F10 Special Construction**

F1010 Special Structures: There are no other structures on site.

F1040 Special Facilities: There are no special facilities on site.

## **G. Building Sitework**

### **G20 Site Improvements**

G2010 Roadways: The driveway at the Gleason Public Library is asphalt paving. The driveway begins at the entrance to the West side of the building and continues in a U shape around the building. Parking is parallel to the driveway on the west and south sides and angled on the east side. It is in fair to poor condition. The asphalt is cracked and uneven in several places. The lines designated the parking spots are somewhat faded. Drainage from paved areas has created paths of washout across the site flowing toward the wetland to the south of the building. Staff has observed that occasionally the parking lot is filled, and additional parking would be desirable.

The septic system and leaching field are located under the parking lot and in the wetlands to the south of the building. No problems have been reported.

G2030 Surfacing and Exterior Steps: Paved walkways begin at the street and continue along each side of the building to the rear. There is no paved walkway behind the building on the south side. Most of the walkways are paved in concrete; the one set of stairs from the east parking lot to the front of the building is concrete. There are some paved brick areas next to the walkways as well. One set of concrete steps are on the east side. All concrete pavement and brickwork are in good condition. These should be monitored, especially after winter, to be sure they are not heaving and becoming uneven.

### **Treatment Recommendation:**

Pavement for the driveway and parking lot should be swept to keep the sand, gravel and dirt off and prevent it from being tracked into the building. We noticed and confirmed with

the director that at certain times of day, the thirty-three car lot is completely full. There is a need to create more spaces to accommodate patrons during high volume periods. The parking lot design could be studied to see if more spaces could be created within the existing area. A study could also investigate the possibility of extending the parking lot to the south, which border on wetlands, to achieve either angled or perpendicular parking without encroaching on the stream located to the South of the paved area.

### **Accessibility Conditions**

As a public building under CMR 521 Architectural Access Board (MAAB) Regulations, the Gleason Library is required to conform to MAAB rules and regulations. The current Gleason Public Library building is fully accessible for the public. The office area entries, doors and clearances at doorways are all compliant. Except for the staff restroom in the lower work area, the restrooms are accessible. In the staff restroom, there is not enough clearance in front of the sink to meet accessibility guidelines. The elevator goes from the ground floor all the way to the third floor. The entrance doors are appropriately sized and have a motorized opener.

Driveway: Delineated parking spaces are beside the west main entrance. There is a clear path to the entrance.

Entrance: There is a four foot wide level landing pad at the exterior of each main entrance door. The two vestibule doors within each entrance have a motorized opener. The clear area in the vestibule and clearances to the side of the doors are compliant as well.

Stairs and Conveyances: The current interior stairs are generally compliant, except for the discontinuous handrail, which was noted above. The elevator is accessible to a stretcher and meets all accessibility requirements.

### **Spending Priorities**

Priorities are established based on considerations of life safety, building stabilization, regulatory requirements and standards, and program needs. [priorities are pending discussion with stakeholders]

Priority 1: Work that should be performed immediately, because it affects public health, safety or remedies active damage to the building.

2. The rooftop ventilation unit, which is nonfunctional, results in no fresh air supplied to occupants, which affects indoor air quality and potentially affects public health. It should be replaced immediately.

Priority 2: Highly recommended due to deferred maintenance but not required to address life or environmental safety or building stabilization; work that addresses serious operating deficiencies or which is required to maintain approvals by regulators overseeing departmental operations.

1. The flat roof over the addition is past its useful life and the asphalt shingle roofing over the addition and the entrance gables is nearing the end of its life cycle. The flat roof is leaking; the asphalt shingles are buckling. As discussed, the design of the venting, raising the flashing against both slate and asphalt shingle sections, and the material layout should be redone in order to vent the roof over the addition and to enable snow and snow melt to run into the gutters without the use of a snow blower on the roof. Given the concern identified above about the ventilator, it would be cost effective to replace this roof when the ventilator is replaced.

3. The HVAC system should be repaired, and parts replaced in such a way that the system is efficient and generally more worry-free. Because the chiller is at the end of its useful life, it should also be replaced. The item cost is the BLW estimate.

4. The carpet in the public areas of the library should be replaced both for appearance and to avoid a tripping hazard.

5. Replace the discontinuous handrail on the stairs to comply with access standards.

Priority 3: Recommended to improve operations and/or site design.

1. At the same time the roof and rooftop mechanical systems are replaced, the gutters and downspouts should be replaced and repaired.

2. Sound isolation between upper floor and circulation desk. The staff has reported that noise from the reading area carries down the grand staircase in the center of the

building to the reception desk. Further study could be done to design a glass partition to attenuate the sound between the upper floor and the circulation desk.

3. The electric wall heaters in the vestibules should be replaced.
4. Book drop – The staff has asked that the possibility of an interior book drop be studied to deliver library materials to conditioned areas and eliminate having to deal with frozen locks. We observe that an interior book drop can be located near the east entry and additional design study can establish the best and most cost-effective solution.
5. Entry Lobby Security – The staff has reported that visual monitoring of both the east and west entrances is awkward for individual staff members. Modification of the collections desk might allow for placement of a single staff member so that both doors are visible. We recommend that additional study of a desk and counter reconfiguration can identify various alternatives for positioning oversight and improving equipment and storage. Security cameras and monitors also offer an alternative solution. Both options can be studied, and the most cost-effective solution determined.
6. Install insulation between exposed areas of attic rafters to reduce energy consumption and expense.

Priority 4: Work that would improve operations and facility longevity or which addresses the impending end of product or equipment life cycles.

1. Replace the asphalt roof over the addition, if not replaced as part of priority 1 scope above.
2. Patch the slate roof by installing missing tiles and inspect flashing around the penetrations.
3. Perform maintenance to exterior windows as described in treatment recommendations, to avoid deterioration of historic fabric and improve weather-tightness.
4. Remove and replace spalling bricks in exterior wall of original building.
5. Resurface the parking lot to improve comfort and surface drainage flow.

Priority 5: Work that may be required in the medium-term, but which does not affect operations at this time.

1. Replace stained acoustic ceiling tiles on top floor of addition.

Town of Carlisle  
Gleason Public Library  
August 1, 2019

2. Painting of bubbled paint areas.
3. Replacement of damaged VCT tiles in utility areas.
4. Repainting of exterior benches.

**Gleason Library  
Systems Assessment Checklist**

							Impact life safety, health	Recommended for building stabilization, regulatory approvals	Improved building or site operations	Improved building longevity, anticipating end of system life cycle	Required in medium term
Uniformat	System/Component	Observations	Recommendations	Description	Item Cost	Total	Cost of Priority 1	Cost of Priority 2	Cost of Priority 3	Cost of Priority 4	Cost of Priority 5
Ref. No.											
<b>A</b>	<b>Substructure</b>										
							\$0	\$0	\$0	\$0	\$0
<b>A10</b>	<b>Foundations</b>					<b>\$400</b>	\$0	\$0	\$0	\$0	\$0
<b>A1010</b>	<b>Standard Foundations</b>						\$0	\$0	\$0	\$0	\$0
03300	Brick and Stone Walls - 1895 Original Building	No apparent problems in brick and field stone walls.	Significant foundation repair & repointing completed in 2009-10. Monitor foundation.	Repointing of mortar.	\$0		\$0	\$0	\$0	\$0	\$0
03300	Columns - 1895 Original Building	4 columns noted on drawings. 3 of 4 columns painted and behind gypsum board. No apparent problems.			\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>A1020</b>	<b>Special Foundations</b>						\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>A1030</b>	<b>Slabs on Grade - 2000 Addition</b>						\$0	\$0	\$0	\$0	\$0
03300	5" Slab on grade - 2000 Addition	Concrete Slab is damaged at rear egress.	Repair to slab at rear egress door is recommended.	Repair of Slab at Rear Egress	\$400		\$0	\$400	\$0	\$0	\$0
	4' foundation walls	No apparent problems	No action is necessary at this time.				\$0	\$0	\$0	\$0	\$0
	Footings	No apparent problems	No action is necessary at this time.				\$0	\$0	\$0	\$0	\$0
<b>A20</b>	<b>Basement Construction</b>					<b>\$0</b>					
<b>A2010</b>	<b>Basement Excavation</b>						\$0	\$0	\$0	\$0	\$0
		None					\$0	\$0	\$0	\$0	\$0
<b>A2020</b>	<b>Basement Walls - 1895 Original Building</b>						\$0	\$0	\$0	\$0	\$0

Gleason Library  
Systems Assessment Checklist

							Impact life safety, health	Recommended for building stabilization, regulatory approvals	Improved building or site operations	Improved building longevity, anticipating end of system life cycle	Required in medium term
Uniformat	System/Component	Observations	Recommendations	Description	Item Cost	Total	Cost of Priority 1	Cost of Priority 2	Cost of Priority 3	Cost of Priority 4	Cost of Priority 5
Ref. No.											
03300	Foundation Wall	No apparent problems in brick and field stone walls.	Significant repair and repointing of the foundation was completed in 2009-10. Foundation should be monitored for the next ten years. Plan for maintenance work in 2030.		\$0		\$0	\$0	\$0	\$0	\$0
07150	Foundation dampproofing	Reported - Dampproofing completed with envelope repairs.			\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>B</b>	<b>Shell</b>						\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>B10</b>	<b>Superstructure</b>					<b>\$0</b>	\$0	\$0	\$0	\$0	\$0
<b>B1010</b>	<b>Floor Construction</b>						\$0	\$0	\$0	\$0	\$0
05120	Columns - 1895 Original Building	One of four observable in basement work area. No apparent settling or movement.			\$0		\$0	\$0	\$0	\$0	\$0
05100	Beams - 1895 Original Building	Unobservable - above ceiling. No apparent settling or movement.			\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
05120	Steel columns - 2000 Addition	Columns are encased in Gypsum board. No apparent settling or movement. Columns appear to be fine.			\$0		\$0	\$0	\$0	\$0	\$0
05100	Steel beams - 2000 Addition	Beams above the finished ceiling were observable as several ceiling tiles were down. No apparent settling or movement. Beams appear to be fine.			\$0		\$0	\$0	\$0	\$0	\$0

**Gleason Library  
Systems Assessment Checklist**

							Impact life safety, health	Recommended for building stabilization, regulatory approvals	Improved building or site operations	Improved building longevity, anticipating end of system life cycle	Required in medium term
Uniformat	System/Component	Observations	Recommendations	Description	Item Cost	Total	Cost of Priority 1	Cost of Priority 2	Cost of Priority 3	Cost of Priority 4	Cost of Priority 5
Ref. No.											
	Structure - 1895 Original Building	Observable rafters intact. Some staining present. No dampness observed. (Noted: 2009-10 Slates were removed, damaged roof boards repaired/replaced, weather barrier applied. Original intact slates reused. Damaged slates replaced.)			\$0		\$0	\$0	\$0	\$0	\$0
	Deck - 1895 Original Building	Boards that are observable from attic are intact. Some staining is present. No dampness observed.			\$0		\$0	\$0	\$0	\$0	\$0
	Structure - 2000 Addition - Flat Roof	Assumed to be in good condition, no apparent settling or movement.			\$0		\$0	\$0	\$0	\$0	\$0
	Deck - 2000 Addition - Flat Roof	Assumed to be in good condition, no apparent settling or movement.		Inspection during demolition of roofing and insulation.	\$0		\$0	\$0	\$0	\$0	\$0
	Structure - 2000 Addition - Entrance Gables	Steel structure observed from inside gable in good condition.			\$0		\$0	\$0	\$0	\$0	\$0
	Deck - 2000 Addition - Entrance Gables	Plywood deck has mildew on it. Steel has some rust. Presumed to be from improperly vented space.			\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
	Structure - 2000 Addition - Main Roof	Assumed to be in good condition as there is no apparent settling or movement.			\$0		\$0	\$0	\$0	\$0	\$0
	Deck - 2000 Addition - Main Roof	Needs further inspection. Shingles are rippling.			\$0		\$0	\$0	\$0	\$0	\$0
<b>B20</b>	<b>Exterior Closure</b>					<b>\$22,320</b>	\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>B2010</b>	<b>Exterior Walls</b>						\$0	\$0	\$0	\$0	\$0
04210	Exterior Surface - 1895 Original Building - Brick/Granite Block/Terra Cotta/Wood	Limited spalling at SW corner of original bldg.	Remove spalled bricks; determine origin of moisture; fix leak; replace bricks and repoint. Powerwash stone to eliminate mildew.	Replacement of exterior brick to match existing.	\$1,542		\$0	\$0	\$0	\$1,542	\$0



**Gleason Library  
Systems Assessment Checklist**

							Impact life safety, health	Recommended for building stabilization, regulatory approvals	Improved building or site operations	Improved building longevity, anticipating end of system life cycle	Required in medium term
Uniformat	System/Component	Observations	Recommendations	Description	Item Cost	Total	Cost of Priority 1	Cost of Priority 2	Cost of Priority 3	Cost of Priority 4	Cost of Priority 5
Ref. No.											
	Joint between original building and addition	Caulking at joint between old and new buildings at SW corner has failed.	Remove failed caulking and recaulk.		\$1,000		\$0	\$1,000	\$0	\$0	\$0
07210	Structure - 1895 Original Building -	Unobservable; however, there appears to be no settling or movement. Assumed to be a timber frame building.			\$0		\$0	\$0	\$0	\$0	\$0
	Interior frame - 1895 Original Building -	Unobservable; however, there appears to be no settling or movement. Assumed to be a timber frame building.					\$0	\$0	\$0	\$0	\$0
07210	Building Insulation - 1895 Original Building	Unknown - Staff reported the inconsistent heating of the second floor area in the winter.		Study the value of additional insulation	\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
4210	Exterior Surface - 2000 Addition - Brick/Granite Block/Metal/Wood	Brick appears to be in very good condition; weep holes are clear. No apparent movement or settling.					\$0	\$0	\$0	\$0	\$0
07210	Structure - 2000 Addition -	Unobservable; though there appears to be no settling or movement.			\$0		\$0	\$0	\$0	\$0	\$0
	Interior frame - 2000 Addition -	Unobservable; though there appears to be no settling or movement.					\$0	\$0	\$0	\$0	\$0
07210	Building Insulation - 2000 Addition -	Unobservable; however batt insulation is noted on drawings.			\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>B2020</b>	<b>Exterior Windows</b>						\$0	\$0	\$0	\$0	\$0
08590	Window frames - Original 1895 Building	Please see report for remarks on particular windows. We noted areas of peeling paint, rotting or missing wood.			\$0		\$0	\$0	\$0	\$0	\$0

**Gleason Library  
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Uniformat	System/Component	Observations	Recommendations	Description	Item Cost	Total	Cost of Priority 1	Cost of Priority 2	Cost of Priority 3	Cost of Priority 4	Cost of Priority 5
Ref. No.											
08510	Window sash - Original 1895 Building	Please see elevations for remarks on particular sash. Some sashes are separating from the glazing; glazing putty is dried out; paint is peeling; wood is exposed.	Glazing putty is dried out and should be tested for asbestos, may need abatement before any work begins. Window sashes should be reglazed, scraped, primed, and repainted.	Scaffold, remove putty, prepare for painting, reglaze, paint, primer + 1 coat	\$5,867		\$0	\$0	\$0	\$5,867	\$0
08510	Window replacements - 1895 Original Building	N/A			\$0		\$0	\$0	\$0	\$0	\$0
08580	Window-interior storm - Original 1895 Building	Interior storm windows appear to be in good condition. We note that they are inoperable; so there is no access to fresh air in the original building.	Storm windows that do not open but which are actually operable should be fixed. The original building is dependent on the mechanical system for fresh air.		\$0		\$0	\$0	\$0	\$0	\$0
8590	Window frames - 2000 Addition	All window frames appear to be in good condition and housing operable windows. We note that there is opening in the corner miter joints. We note that there are no weep holes between the bottom of the window frame and the sill (this is filled with caulk).	??	Caulk the frames where separated at corner joints. Remove caulk between bottom frame and sill. Paint caulk and touch up at frame as needed.	\$6,200		\$0	\$0	\$0	\$6,200	\$0
8510	Window sash - 2000 Addition	sashes appear to be operable and in good condition.					\$0	\$0	\$0	\$0	\$0
08510	Window replacements - 2000 Addition	N/A	N/A		\$0		\$0	\$0	\$0	\$0	\$0
08580	Window - storm - 2000 Addition	N/A	N/A		\$0		\$0	\$0	\$0	\$0	\$0
					\$0		\$0	\$0	\$0	\$0	\$0
<b>B2030</b>	<b>Exterior Doors</b>				\$0		\$0	\$0	\$0	\$0	\$0
08400	East and West exterior wooden Main Entrance doors: 2000 Addition	Protective finish is peeling. Some cracking and graying of wood. The doors stick when opening. Opening mechanism is of concern.	Doors should be scraped, sanded and re-sealed. Adjustment of mechanism rec'd.	Sand, stain, refinish exterior and interior doors and sidelights	\$1,700		\$0	\$0	\$1,700	\$0	\$0

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Uniformat	System/Component	Observations	Recommendations	Description	Item Cost	Total	Cost of Priority 1	Cost of Priority 2	Cost of Priority 3	Cost of Priority 4	Cost of Priority 5
Ref. No.											
							\$0	\$0	\$0	\$0	\$0
	Operator adjustment	1500			\$3,000		\$0	\$0	\$3,000	\$0	\$0
08200	Exterior wood doors - North Egress (former main entry) doors: 1895 Original Building	Dirty	Cleaning		\$250		\$0	\$0	\$0	\$250	\$0
	Special doors - South Egress Door: 2000 Addition	Door sticks and is not sealed completely at threshold, water/leaf infiltration is apparent. Rust observed. Damage at concrete threshold.	Consider replacement of door and frame. Alternatively grind and refinish the door and frame, add a sweep to prevent water from entering.	Remove door; remove cylinder lock; install new door; reinstall cylinder lock. Refurbish frame. Repaint and install new sweep.	\$2,261		\$0	\$0	\$2,261	\$0	\$0
	Special doors - Outside fence doors to exterior chiller	Protective finish is peeling. Some graying of wood.	Doors should be scraped, sanded and re-sealed.	Sand, stain, refinish exterior doors to chiller area.	\$500		\$0	\$0	\$500	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>B30</b>	<b>Roofing</b>					<b>\$88,120</b>	\$0	\$0	\$0	\$0	\$0
<b>B3010</b>	<b>Roof Coverings</b>						\$0	\$0	\$0	\$0	\$0
07610	Roofing, slate - 1895 Original Building	A few shingles have slipped off. (Noted that in 2009-10 the slates were completely removed, damaged roof boards were repaired or replaced, a weather barrier was applied, and original slates in good condition were reused and damaged slates were replaced with a matching slate of similar quality).	Raise flashing two feet where slate shingles meet the flat roof.	2.5% of roof area	\$7,751		\$0	\$7,751	\$0	\$0	\$0
07600	Flashing, edge - 1895 Original Building	We observed flashing at ground level	No work recommended at this time.	8 inch, copper, plain, 20 oz.	\$0		\$0	\$0	\$0	\$0	\$0
07600	Flashing, hip-ridge-valley/dormer/penetrations - 1895 Original Building	Not observable, but no subsequent damage is apparent on the interior.	No work recommended at this time.	24 inch, copper, W-shaped, 16 oz.	\$0		\$0	\$0	\$0	\$0	\$0

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Uniformat	System/Component	Observations	Recommendations	Description	Item Cost	Total	Cost of Priority 1	Cost of Priority 2	Cost of Priority 3	Cost of Priority 4	Cost of Priority 5
Ref. No.											
07600	Flashing, step-chimney - 1895 Original Building	Installed during envelope restoration. Should be inspected during roofing job.	Recommend that slate roofer examine the flashing closely and determine condition.	24" copper base flashing, sheets, 20 oz.w/nailers & reglets	\$1,707		\$0	\$0	\$1,707	\$0	\$0
07600	Flashing, penetrations - 1895 Original Building	We note some movement in the plumbing vent flashing nearby slate.	Recommend checking the area around the plumbing vent on east side roof of original building. Provide new boot.	24" copper base flashing, sheets, 20 oz.w/nailers & reglets; 4SF per pipe	\$220		\$0	\$0	\$220	\$0	\$0
07210	Attic insulation - 1895 Original Building	No insulation in east and west eaves. Staining noted on underside of roof decking and bricks of chimney. No dampness was present.	Consider installing batt insulation and vapor barrier for energy efficiency.	R38 Batt/Vapor Barrier/Ventilator	\$3,146		\$0	\$0	\$3,146	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
07530	Roofing, membrane - 2000 Addition (flat roof)	Flat roof is leaking in many places.	Remove membrane, investigate insulation. If saturated, replace insulation and membrane. Modify flashing details to provide deeper basin at asphalt roof and slate roof.	demo existing roof, 8" rigid insulation; EPDM, 60 mils, fully adhered.	\$23,422		\$0	\$23,422	\$0	\$0	\$0
	Roofing, asphalt - 2000 Addition (main roof)	Asphalt shingles at end of useful life. Shingles rippling.	Re-add ventilation to roof system. Raise flashing to two feet.	Demo existing roof; inspect decking; replace vent system on north side; re-roof w asphalt shingles	\$23,471		\$0	\$0	\$23,471	\$0	\$0
	Roofing, asphalt - 2000 Addition (entrance gables)	Asphalt shingles at end of useful life. Shingles rippling. Ventilation was removed from this roof.		Standard laminated multi layer shingle	\$2,751		\$0	\$0	\$2,751	\$0	\$0
07600	Flashing, edge - 2000 Addition	Flashing damaged on west side flat roof area.	Replace flashing with new roof.	8 inch, copper, plain, 20 oz.	\$14,624		\$0	\$0	\$14,624	\$0	\$0

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Uniformat	System/Component	Observations	Recommendations	Description	Item Cost	Total	Cost of Priority 1	Cost of Priority 2	Cost of Priority 3	Cost of Priority 4	Cost of Priority 5
Ref. No.											
07600	Flashing, hip-ridge-valley/dormer/penetrations - 2000 Addition	Not observable, but no subsequent damage is apparent on the interior.	Replace flashing with new roof.	24 inch, copper, W-shaped, 16 oz.	\$0		\$0	\$0	\$0	\$0	\$0
	Curb and Boots	Required Replacement	Replacement with new roof system. Curbs may be resized for new HVAC.	New curbs and boots	\$3,000		\$0	\$3,000	\$0	\$0	\$0
07620	Gutters	One gutter on west side is bent.	Replace gutter when roof is being replaced.		\$523		\$0	\$523	\$0	\$0	\$0
07620	Downspouts	Copper downspouts have failed. The majority of vertical seams have opened.	Replacement required. Consider resizing or corrugating the downspout material. Not replacing will begin to damage the masonry.		\$7,505		\$0	\$7,505	\$0	\$0	\$0
<b>B3020</b>	<b>Roof Openings</b>						\$0	\$0	\$0	\$0	\$0
07800	Skylights-existing	No leaking observed. (Noted that the roofing around it was replaced in 2010 during envelope restoration.)	No action required.		\$0		\$0	\$0	\$0	\$0	\$0
07800	Skylights-new	N/A	N/A		\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>C</b>	<b>Interiors</b>						\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>C10</b>	<b>Interior Construction</b>					<b>\$15,000</b>	\$0	\$0	\$0	\$0	\$0
<b>C1010</b>	<b>Interior Partitions</b>						\$0	\$0	\$0	\$0	\$0
09250	Partition, gwb non-rated: 1895 Original Building	Interior partitions are in Very Good.		1 layer 5/8 in. gwb ea. sd. on 3 5/8 in. mtl. studs @ 24in. o.c.	\$0		\$0	\$0	\$0	\$0	\$0
09250	Partition, gwb, 1 hr FR: 1895 Original Building			2 layer 5/8 in. gwb ea. sd. on 2 1/2 in. mtl. studs @ 16in. o.c., STC 48	\$0		\$0	\$0	\$0	\$0	\$0
06200	Interior glazed openings: 1895 Original Building	N/A			\$0		\$0	\$0	\$0	\$0	\$0
	Plaster: 1895 Original Building				\$0		\$0	\$0	\$0	\$0	\$0

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Uniformat	System/Component	Observations	Recommendations	Description	Item Cost	Total	Cost of Priority 1	Cost of Priority 2	Cost of Priority 3	Cost of Priority 4	Cost of Priority 5
Ref. No.											
					\$0		\$0	\$0	\$0	\$0	\$0
09250	Partition, gwb non-rated: 2000 Addition				\$0		\$0	\$0	\$0	\$0	\$0
09250	Partition, gwb, 1 hr FR: 2000 Addition				\$0		\$0	\$0	\$0	\$0	\$0
06200	Interior glazed openings: 2000 Addition				\$0		\$0	\$0	\$0	\$0	\$0
	Plaster: 2000 Addition				\$0		\$0	\$0	\$0	\$0	\$0
	Interior Glazed Partition/Door by Stairs			Glazed enclosure & door by stairs to mitigate sound from upstairs reading room to reference desk area.	\$15,000		\$0	\$0	\$0	\$0	\$0
<b>C1020</b>	<b>Interior Doors</b>						\$0	\$0	\$0	\$0	\$0
08200	Doors: 1895 Original Building				\$0		\$0	\$0	\$0	\$0	\$0
08200	Doors, fire rated (1HR): 1895 Original Building				\$0		\$0	\$0	\$0	\$0	\$0
08200	Doors, fire rated (2HR): 1895 Original Building				\$0		\$0	\$0	\$0	\$0	\$0
08710	Door hardware: 1895 Original Building				\$0		\$0	\$0	\$0	\$0	\$0
08710	Panic systems: 1895 Original Building				\$0		\$0	\$0	\$0	\$0	\$0
					\$0		\$0	\$0	\$0	\$0	\$0
08200	Doors: 2000 Addition				\$0		\$0	\$0	\$0	\$0	\$0
08200	Doors, fire rated (1HR): 2000 Addition				\$0		\$0	\$0	\$0	\$0	\$0
08200	Doors, fire rated (2HR): 2000 Addition				\$0		\$0	\$0	\$0	\$0	\$0
08710	Door hardware: 2000 Addition				\$0		\$0	\$0	\$0	\$0	\$0
08710	Panic systems: 2000 Addition				\$0		\$0	\$0	\$0	\$0	\$0
					\$0		\$0	\$0	\$0	\$0	\$0
<b>C1030</b>	<b>Interior Specialties</b>				\$0		\$0	\$0	\$0	\$0	\$0
10160	Toilet partitions: 1895 Original Building				\$0		\$0	\$0	\$0	\$0	\$0
10160	Urinal screens: 1895 Original Building				\$0		\$0	\$0	\$0	\$0	\$0



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Ref. No.											
10800	Bathroom accessories: 1895 Original Building				\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
10160	Toilet partitions: 2000 Addition				\$0		\$0	\$0	\$0	\$0	\$0
10160	Urinal screens: 2000 Addition				\$0		\$0	\$0	\$0	\$0	\$0
10800	Bathroom accessories: 2000 Addition				\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>C20</b>	<b>Stairways</b>					<b>\$2,500</b>	\$0	\$0	\$0	\$0	\$0
<b>C2010</b>	<b>Stair Construction</b>						\$0	\$0	\$0	\$0	\$0
05510	Framing system				\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>C2020</b>	<b>Stair Finishes</b>						\$0	\$0	\$0	\$0	\$0
	Terrazzo stair: 2000 Addition				\$0		\$0	\$0	\$0	\$0	\$0
09650	Stair treads & risers				\$0		\$0	\$0	\$0	\$0	\$0
	Railings, balusters	RH railing discontinuous from second to first floor.	Replace handrail.		\$2,500		\$0	\$2,500	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>C30</b>	<b>Interior Finishes</b>					<b>\$42,058</b>	\$0	\$0	\$0	\$0	\$0
<b>C3010</b>	<b>Interior Wall Finishes</b>						\$0	\$0	\$0	\$0	\$0
09920	Painting				\$0		\$0	\$0	\$0	\$0	\$0
	Tile						\$0	\$0	\$0	\$0	\$0
	Special finishes	Some areas of panelling appear dry and the finish looks dull especially at windows and over Fan Coil Units.	Lightly sand and refinish the wood.				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>C3020</b>	<b>Interior Floor Finishes</b>						\$0	\$0	\$0	\$0	\$0
	Wood flooring						\$0	\$0	\$0	\$0	\$0
09310	Porcelain tile						\$0	\$0	\$0	\$0	\$0
09685	Carpeting	Raised in many places. Potential for tripping exists.	Replace carpet	Replace carpet	\$41,540		\$0	\$41,540	\$0	\$0	\$0
	Vinyl tile						\$0	\$0	\$0	\$0	\$0
	Sealed concrete						\$0	\$0	\$0	\$0	\$0
	Special surfaces - terrazzo						\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0

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Ref. No.											
<b>C3030</b>	<b>Interior Ceiling Finishes</b>						\$0	\$0	\$0	\$0	\$0
09500	Acoustic Ceiling Tile	Some tiles have been stained by the leaking roof.			\$518		\$0	\$0	\$0	\$518	\$0
09210	Plaster ceilings - Flat Paint				\$0		\$0	\$0	\$0	\$0	\$0
	Other						\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>D</b>	<b>Services</b>						\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>D10</b>	<b>Conveying Systems</b>					<b>\$0</b>	\$0	\$0	\$0	\$0	\$0
14240	Elevator	Inspected every 3 months; Passed state inspection 6/18. Sensor replaced 8/17; battery replaced 2/18.	hydraulic, 2500 lb., passenger		\$0		\$0	\$0	\$0	\$0	\$0
<b>D20</b>	<b>Plumbing Systems</b>					<b>\$0</b>	\$0	\$0	\$0	\$0	\$0
15400	Water supply piping	Pipes from well to building are buried. Well water supplied to the building is inspected every six months. Water is high in nitrates during the winter. 5/19: New wellhead installed above grade.			\$0		\$0	\$0	\$0	\$0	\$0
	Drain piping	The drain pipe to the septic system is unobservable.					\$0	\$0	\$0	\$0	\$0
	Fixtures: bathrooms	We observed the restrooms in the building. All appear to be in very good condition and are operable.					\$0	\$0	\$0	\$0	\$0
	Fixtures: other	We observed a kitchenette sink, refrigerator, microwave.					\$0	\$0	\$0	\$0	\$0
	Water Heater	Bradford White, 36 gallon; 1 phase; Electric 240 volts					\$0	\$0	\$0	\$0	\$0
	Dehumidifier	Humidity is high in mech rm. Dehumidifier runs in summer. Drains into floor drain.					\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>D30</b>	<b>HVAC Systems</b>					<b>\$259,188</b>	\$0	\$0	\$0	\$0	\$0

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Ref. No.											
15850	Heat Generation	Gas fired, condensing Lochivar boiler w pump rated for 600 MBH gas input. Rust on the distribution pipes. 8/17 Time clocks added. Problems: low pressure in chiller; cleaned 26 strainers 10/17; added glycol 11/17; blew lines w nitrogen to clean out 12/17; installed installed filter feeder 3/18; new draft motor 3/18; new pump assembly 4/18; replaced two ball valves 4/18.			\$0		\$0	\$0	\$0	\$0	\$0
15850	Cooling Generation	30 Ton Trane Air cooled chiller, Model CGA30. Continued low pressure alarms, possible leaking.	Replace the chiller.	Quote from WJS Mechanical Corp	\$54,200		\$0	\$54,200	\$0	\$0	\$0
15850.0	Heating and Cooling Distribution	BLW Engineering Study, 2016.	System Upgrade	Option 1: Existing System Upgrade, Water Testing, New Circulating Pumps, New Chiller Pump, Differential By-Pass Valve; Replace boiler room piping.	\$143,228		\$0	\$143,228	\$0	\$0	\$0
	Heating and Cooling Distribution	BLW Engineering Study, 2016.	Piping replacement	Option 2: FCU Piping replacement and soffit repair.	\$40,563		\$0	\$40,563	\$0	\$0	\$0
	Distribution - water	Rusted valves and collars on the two pipe changeover system with manual summer/winter changeover valve.	Part of HVAC Study				\$0	\$0	\$0	\$0	\$0
	Ventilation	Not working.	Replace the Ventilation Unit.	Quote from WJS Mechanical Corp	\$18,140		\$18,140	\$0	\$0	\$0	\$0

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Ref. No.											
	Distribution - Fan Coil Units	40 Units in the Building - Reports of various units needing maintenance	Covered in HVAC study				\$0	\$0	\$0	\$0	\$0
	Electric Wall Heaters (in vestibules)	Rusting. Manual control is missing. Runs on its own.	Replace each unit		\$3,057		\$0	\$0	\$3,057	\$0	\$0
<b>D40</b>	<b>Fire Protection Systems</b>		<b>Not Used</b>			<b>\$0</b>	\$0	\$0	\$0	\$0	\$0
15330	Fire Supression	Gleason Library does not have sprinklers.			\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>D50</b>	<b>Electrical Systems</b>					<b>\$1,500</b>	\$0	\$0	\$0	\$0	\$0
<b>D5010</b>	<b>Electrical Service &amp; Distribution</b>						\$0	\$0	\$0	\$0	\$0
16400	Electrical service	600 Amps of Service - Adequate service and no reports of any problems.			\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>D5020</b>	<b>Lighting &amp; Branch Wiring</b>						\$0	\$0	\$0	\$0	\$0
16500	Electrical circuits		Two new electric circuits to original building roof meeting flat roof.	Supply to heating cables.	\$1,000		\$0	\$1,000	\$0	\$0	\$0
	Heating cables			Installed on first two feet of slate roof above flat roof.	\$500		\$0	\$500	\$0	\$0	\$0
	Wiring for HVAC Option 1			Included in HVAC			\$0	\$0	\$0	\$0	\$0
<b>D5030</b>	<b>Communication &amp; Security Systems</b>						\$0	\$0	\$0	\$0	\$0
16720	Fire alarm system	Simplex 4100 ES Fire control/Alarm system is operable. - Annual Contract with Johnson Controls	None	None	\$0		\$0	\$0	\$0	\$0	\$0
16720	Security system	Lexington Alarm	None	None	\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>D5040</b>	<b>Special Electrical Systems</b>		<b>Not Used</b>				\$0	\$0	\$0	\$0	\$0
16620	Emergency Generator				\$0		\$0	\$0	\$0	\$0	\$0
	IT Systems: battery backup, wiring						\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0

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Ref. No.											
<b>E</b>	<b>Equipment &amp; Furnishings</b>						\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>E10</b>	<b>Equipment</b>					<b>\$23,247</b>	\$0	\$0	\$0	\$0	\$0
<b>E1010</b>	<b>Commercial Equipment</b>		<b>Not Used</b>				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>E1020</b>	<b>Institutional Equipment</b>		<b>Not Used</b>				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>E1030</b>	<b>Vehicular Equipment</b>		<b>Not Used</b>				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>E1040</b>	<b>Other Equipment</b>		<b>Not Used</b>				\$0	\$0	\$0	\$0	\$0
11400	Kitchen shelving				\$0		\$0	\$0	\$0	\$0	\$0
11400	Kitchen equipment				\$0		\$0	\$0	\$0	\$0	\$0
	Reception Desk	Not correctly placed to view both doors.	Mirrors, Cameras, or Rebuild of Desk Area		\$19,107		\$0	\$0	\$0	\$0	\$0
	Book Drop			Chute, Bin and demo of wall.	\$4,140		\$0	\$0	\$0	\$0	\$0
<b>E20</b>	<b>Furnishings</b>					<b>\$0</b>	\$0	\$0	\$0	\$0	\$0
<b>E2010</b>	<b>Fixed Furnishings</b>		<b>See FF&amp;E below</b>				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>F</b>	<b>Other Building Construction</b>						\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>F10</b>	<b>Special Construction</b>					<b>\$0</b>	\$0	\$0	\$0	\$0	\$0
<b>F1010</b>	<b>Special Structures</b>	<b>N/A</b>	<b>Not used</b>				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>F1020</b>	<b>Integrated Construction</b>	<b>N/A</b>	<b>Not used</b>				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>F1030</b>	<b>Special Construction Systems</b>	<b>N/A</b>	<b>Not used</b>				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>F1040</b>	<b>Special Facilities</b>	<b>N/A</b>	<b>Not used</b>				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>F1050</b>	<b>Special Controls &amp; Instrumentation</b>	<b>N/A</b>	<b>Not used</b>				\$0	\$0	\$0	\$0	\$0

Gleason Library  
Systems Assessment Checklist

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Uniformat	System/Component	Observations	Recommendations	Description	Item Cost	Total	Cost of Priority 1	Cost of Priority 2	Cost of Priority 3	Cost of Priority 4	Cost of Priority 5
Ref. No.											
							\$0	\$0	\$0	\$0	\$0
<b>F20</b>	<b>Selective Demolition</b>	<b>N/A</b>				<b>\$0</b>	\$0	\$0	\$0	\$0	\$0
<b>F2010</b>	<b>Building Elements Demolition</b>						\$0	\$0	\$0	\$0	\$0
02070	Interior demolition				\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>G</b>	<b>Building Sitework</b>						\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>G10</b>	<b>Site Preparation</b>					<b>\$0</b>	\$0	\$0	\$0	\$0	\$0
<b>G1010</b>	<b>Subsurface Investigation</b>		<b>Not Used</b>				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>G1020</b>	<b>Site Clearing</b>	<b>N/A</b>	<b>Not Used</b>				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>G1030</b>	<b>Site Demolition &amp; Relocations</b>						\$0	\$0	\$0	\$0	\$0
<b>G1030</b>	<b>Building Demolition</b>	<b>N/A</b>					\$0	\$0	\$0	\$0	\$0
					\$0		\$0	\$0	\$0	\$0	\$0
02060					\$0		\$0	\$0	\$0	\$0	\$0
02060					\$0		\$0	\$0	\$0	\$0	\$0
02060					\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>G1030</b>	<b>Site Elements Demo</b>		<b>Not Used</b>				\$0	\$0	\$0	\$0	\$0
02060		N/A			\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>G1040</b>	<b>Site Earthwork</b>						\$0	\$0	\$0	\$0	\$0
02200		N/A			\$0		\$0	\$0	\$0	\$0	\$0
02200					\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>G1050</b>	<b>Hazardous Waste Remediation *</b>	<b>N/A</b>	<b>Not Used</b>				\$0	\$0	\$0	\$0	\$0
02080					\$0		\$0	\$0	\$0	\$0	\$0
02080					\$0		\$0	\$0	\$0	\$0	\$0
02080					\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0



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Systems Assessment Checklist**

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Ref. No.											
G20						\$47,333	\$0	\$0	\$0	\$0	\$0
G2010	Roadways	We observed cracks in the asphalt paving. Paint is worn.	Regular maintenance can prolong life to 25 years.				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
G2020	Parking Lots						\$0	\$0	\$0	\$0	\$0
02510	Parking	We observed many cracks in the asphalt paving. Parking lot paint is worn.	Regular maintenance can prolong life to 25 years.	Repaving, not water management.	\$45,833		\$0	\$0	\$0	\$45,833	\$0
	Parking Lot Redesign to add spaces	Staff reports that lot is no longer large enough.	A study of the environmental variables and the number of spaces needed.	We cannot provide an estimate as there are too many environmental variables.	\$0		\$0	\$0	\$0	\$0	\$0
G2030	Pedestrian Paving						\$0	\$0	\$0	\$0	\$0
02230	Walkways	Concrete sidewalks are in good condition. Concrete and brick walks in front of original building are in good condition.	Regular observation and maintenance when needed is necessary to maintain an even surface.		\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
G2040	Site Development						\$0	\$0	\$0	\$0	\$0
02900	Playground Equipment	Benches, sculpture and other ornamentation appear in generally good condition. We note that some of the benches need to be scraped and repainted.	We note that some of the benches need to be scraped and repainted. Paint is peeling on some benches.		\$1,500		\$0	\$0	\$0	\$0	\$1,500
							\$0	\$0	\$0	\$0	\$0
G2050	Landscaping						\$0	\$0	\$0	\$0	\$0
02900	Plantings	Plantings appear established and healthy.	Regular weeding, fertilizing and pruning is necessary to maintain the gardens.		\$0		\$0	\$0	\$0	\$0	\$0

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Ref. No.											
2810.0	Site Irrigation	Maintained and in operating condition; sprinkler heads have been replaced when damaged.	Continued maintenance of the system will support a working irrigation system and a healthy landscape.		\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>G30</b>	<b>Site Plumbing Utilities</b>					<b>\$0</b>	\$0	\$0	\$0	\$0	\$0
G3010	Site Water Supply & Distribution	Well water supplies the site. Recent testing revealed nitrates in water.	Not Used				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>G3020</b>	<b>Site Sanitary Sewer System</b>	Septic System	System receives regular cleanout and maintenance				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>G3030</b>	<b>Site Storm Water System</b>						\$0	\$0	\$0	\$0	\$0
02900	Piping		10 in. PVC pipe, trenching, bedding & backfill		\$0		\$0	\$0	\$0	\$0	\$0
2810.0	Catch basins		cast in place 8 ft. deep		\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>G3040</b>	<b>Site Fuel Distribution System</b>		Not Used				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>G3050</b>	<b>Site Special Plumbing Systems</b>						\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>G40</b>	<b>Site HVAC Utilities</b>		Not Used			<b>\$0</b>	\$0	\$0	\$0	\$0	\$0
<b>G4010</b>	<b>Site Steam Distribution Systems</b>		Not Used				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>G4020</b>	<b>Site Hydronic Distribution Systems</b>		Not Used				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
<b>G50</b>	<b>Site Electrical Utilities</b>		Not Used			<b>\$0</b>	\$0	\$0	\$0	\$0	\$0
<b>G5010</b>	<b>Site Electrical Distribution</b>						\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0

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Ref. No.											
G5020	Site Lighting Systems						\$0	\$0	\$0	\$0	\$0
16502					\$0		\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
G5030	Site Communications & Security Systems		Not Used				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
G5040	Other Site Electrical Utilities		Not Used				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
G60	Other Site Construction		Not Used				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
G6010	Service Tunnels		Not Used				\$0	\$0	\$0	\$0	\$0
							\$0	\$0	\$0	\$0	\$0
G6020	Other Site Systems & Equipment		Not Used				\$0	\$0	\$0	\$0	\$0
Subtotal Construction					\$463,419	\$463,419	\$18,140	\$327,133	\$56,437	\$60,209	\$1,500
General Conditions (Overhead and Profit) per Means						\$97,318					
Design Contingency						\$23,171					
Construction Contingency						\$46,342					
Total Construction Cost						\$630,249	\$24,670	\$444,900	\$76,755	\$81,884	\$2,040
Gross building area						11,500					
Construction cost per square foot						\$55					
Project Cost Summary:											
Construction Cost						\$630,249					
Furniture, Fixtures & Equipment						\$0					
Architect/Engineering Fee						\$68,067					
Civil Engineering Fee						\$0					
Reimbursables						\$9,454					

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Uniformat	System/Component	Observations	Recommendations	Description	Item Cost	Total	Cost of Priority 1	Cost of Priority 2	Cost of Priority 3	Cost of Priority 4	Cost of Priority 5
Ref. No.											
Total Project Cost						\$707,770	\$27,705	\$499,623	\$86,196	\$91,955	\$2,291



